WHAT IS CLAIMED IS:

1. A method of shaping the waveform of an optical signal, comprising the steps of:

inputting said optical signal into a first optical gate to suppress a space-level noise of said optical signal; and

inputting an optical signal output from said first optical gate into a second optical gate to suppress a mark-level noise of said optical signal output from said first optical gate.

2. A method according to claim 1, wherein said first optical gate has polarization independence.

3. A method according to claim 1, wherein said first optical gate comprises an electroabsorption optical modulator.

4. A method according to claim 1, wherein said second optical gate comprises a limiter optical amplifier.

5. A method according to claim 1, wherein said second optical gate comprises a gain-clamped optical amplifier including a DFB-LD.

6. A method according to claim 1, further comprising the step of inputting probe light into said first optical gate.

7. A method according to claim 6, wherein:

said probe light has a wavelength different from the wavelength of said optical signal input into said first optical gate; and

said optical signal output from said first optical gate has the same wavelength as the wavelength of said probe light.

8. A method according to claim 7, wherein said probe light is input into said first optical gate in the same direction as that of said optical signal input into said first optical gate.

9. A method according to claim 8, further comprising the step of separating said optical signal output from said first optical gate from said optical signal input into said first optical gate.

10. A method according to claim 6, wherein said probe light has the same wavelength as the wavelength of said optical signal input into said first optical gate.

11. A method according to claim 10, wherein said probe light is input into said first optical gate in a direction opposite to that of said optical signal input into said first optical gate.

12. A device for shaping the waveform of an optical signal, comprising:

first and second optical gates cascaded;

said first optical gate receiving said optical signal to suppress a space-level noise of said optical signal;

said second optical gate receiving an optical signal output from said first optical gate to suppress a mark-level noise of said optical signal output from said first optical gate.

13. A device according to claim 12, wherein said first optical gate has polarization independence.

14. A device according to claim 12, wherein said first optical gate comprises an electroabsorption optical modulator.

15. A device according to claim 12, wherein said second optical gate comprises a limiter optical amplifier.

16. A device according to claim 12, wherein said second optical gate comprises a gain-clamped optical amplifier including a DFB-LD.

17. A device according to claim 12, further comprising a probe light source for inputting probe light into said first optical gate.

18. A device according to claim 17, wherein:

said probe light has a wavelength different from the wavelength of said optical signal input into said first optical gate; and

said optical signal output from said first optical gate has the same wavelength as the wavelength of said probe light.

19. A device according to claim 18, wherein said probe light is input into said first optical gate in the same direction as that of said optical signal input into said first optical gate.

20. A device according to claim 19, further comprising means for separating said optical signal output from said first optical gate from said optical signal input into said first optical gate.

21. A device according to claim 17, wherein said probe light has the same wavelength as the wavelength of said optical signal input into said first optical gate.

22. A device according to claim 21, wherein said probe light is input into said first optical gate in a direction opposite to that of said optical signal input into said first optical gate.

23. A system comprising:

an optical fiber transmission line for transmitting an optical signal; and

at least one waveform shaping device arranged along said optical fiber transmission line;

said waveform shaping device comprising:

first and second optical gates cascaded;

said first optical gate receiving said optical signal to suppress a space-level noise of said optical signal;

said second optical gate receiving an optical signal output from said first optical gate to suppress a mark-level noise of said optical signal output from said first optical gate.

24. A system comprising:

an optical demultiplexer for receiving WDM signal light obtained by wavelength division multiplexing a plurality of optical signals to separate said WDM signal light into said plurality of optical signals;

a plurality of waveform shaping devices for receiving said plurality of optical signals output from said optical demultiplexer, respectively; and

an optical multiplexer for wavelength division multiplexing a plurality of optical signals output from said plurality of waveform shaping devices;

each of said waveform shaping devices comprising:

first and second optical gates cascaded;

said first optical gate receiving said optical signal input into each waveform shaping device to suppress a space-level noise of said optical signal;

said second optical gate receiving an optical signal output from said first optical gate to suppress a mark-level noise of said optical signal output from said first optical gate.